Dekadal GFS-Temp

GFS (ClimPars) Temperature

Prerequisite

The Iraq Dekadak GFS Temperature process creates a 9-maps graphic product for the website. This process requires the processed Afghanistan dekadal GFS-Temp ArcGrids as input data.

The Afghanistan dekadal GFS-Temp ArcGrids are created using the Global Daily GFS ClimPars source (raw) data.

Run dates:

a. Operational run process dates come from the system date. It runs 3 times during the month on the 1st, 11th, and 21st of each month.
b. Manual run download using the user-defined date input arguments using 4-digit year and 2-digit dekad of the year (1-36).

Afghanistan Dekadal GFS-Temp

Main script process steps

- Checks availability of the Global Daily GFS Pars for the dekad period
- Creates daily GFS-Temp grids
- Creates dekad GFS-Temp grids

Python scripts used in the process

- `D:\FEWS\DataPortal_iraq\bin\asia\centralasia\afghanistan\dekadal\gfsclimpars\afghanistan_dekadal_gfs_temp_config.py` → Configuration file.
- `D:\FEWS\DataPortal_iraq\bin\asia\centralasia\afghanistan\dekadal\gfsclimpars\afghanistan_dekadal_gfs_temp.py` → Main script.
- `D:\FEWS\DataPortal_iraq\lib\dekadal_climpar_processes.py` (uses another python lib scripts)
- `D:\FEWS\DataPortal_iraq\lib\periodicity_calculator.py`
- `D:\FEWS\DataPortal_iraq\lib\dekadal_functions.py`

Products

Grids → `D:\FEWS\DataPortal_iraq\data\CentralAsia\Afghanistan\Dekadal\GFS-Temp\grids` (includes daily and dekadal grids)

Command line

```
USAGE:
D:\FEWS\DataPortal_iraq\bin\asia\centralasia\afghanistan\dekadal\gfsclimpars\afghanistan_dekadal_gfs_temp.py
YYYYDD
 where YYYY is the 4 digit year and.. DD is the 2 digit dekad of the year (01-36). YYYYDD is an optional input,
so the default input information is today's date.
```

Example: `afghanistan_dekadal_gfs_temp.py201425`

Iraq Dekadal GFS-Temp

Main script process steps

- Creates the temperature and anomaly graphic for Iraq with nine maps in PNG format. The input data for this process is the grid files from the Afghanistan dekadal temperature process and the Iraq IWMI long term average grids.

Python scripts used in the process

- `D:\FEWS\DataPortal_iraq\bin\asia\middleeast\iraq\dekadal\gfsclimpars\iraq_dekadal_gfs_temp_config.py` Configuration file.
- `D:\FEWS\DataPortal_iraq\bin\asia\middleeast\iraq\dekadal\gfsclimpars\iraq_dekadal_gfs_temp.py` Main script.
- `D:\FEWS\DataPortal_iraq\lib\dekadal_climpar_processes.py` (uses another python lib scripts)
- `D:\FEWS\DataPortal_iraq\lib\periodicity_calculator.py`
- `D:\FEWS\DataPortal_iraq\lib\dekadal_functions.py`

Products

Graphics → `D:\FEWS\DataPortal_iraq\data\MiddleEast\Iraq\Dekadal\GFS-Temp\graphics\anomdek` (PNG files)

Command line

```
USAGE: D:\FEWS\DataPortal_iraq\bin\asia\middleeast\iraq\dekadal\gfsclimpars\iraq_dekadal_gfs_temp.py YYYYDD
 where YYYY is the 4 digit year and.. DD is the 2 digit dekad of the year (01-36). YYYYDD is an optional input,
so the default input information is today's date.
```

Example: `iraq_dekadal_gfs_temp_graphic.py201425`

Windows Scheduler Task setup

For operational runs set it up for **Dekadal GFSPars Temperature** to run using Afghanistan and Iraq bin main scripts at **7:30 AM (CT)** on the **1st, 11th, and 21st** of each month.

- `D:\FEWS\DataPortal_iraq\bin\centralasia\afghanistan\dekadal\gfsclimpars\afghanistan_dekadal_gfs_temp.py`
- `D:\FEWS\DataPortal_iraq\bin\middleeast\iraq\dekadal\gfsclimpars\iraq_dekadal_gfs_temp.py`

Steps

1. Open Scheduler Task
2. Go to folder “Iraq_Tasks”. If the folder does not exists, create it under “Task Scheduler Library”
3. Right click on “Iraq_Tasks” folder and click on “Create Task”
4. Under General
    a. Set up Name: **Dekadal GFSPars Temperature** (required) and Description (optional)
    b. Click on “Run whether user is logged on or not”
    c. Check option “Run with highest privileges” (*may need to unchecked if scheduled task does not run*)
5. Under Triggers
    a. Click on New and set it up based on the information above
6. Under Actions:
    a. Click on New and add the 2 python scripts paths described above in the exact order
7. Under Settings:
    a. In the checked “Stop the task if it runs longer than:”, select 2 hours.

After creating the scheduler task, it can be exported as an XML to be used in another system.

Python batch script for manual runs

A batch python script can be used to run the regions processes from one command line.

```
D:\FEWS\DataPortal_iraq\bin\allregions_dekadal_gfspars.py YYYY DD
```

Exercise

- Make sure Global Daily GFSPars daily source data for Sep 1-20 is available.
- Manual run for Sep dekad 1, 2019 (25 of the year) and Sep dekad 2, 2019 (26 of the year). Use BAT file approach.

```
D:\FEWS\DataPortal_iraq\bin\allregions_dekadal_gfspars.py 2019 25
D:\FEWS\DataPortal_iraq\bin\allregions_dekadal_gfspars.py 2019 26
```

- Manual run to get an incomplete run.

```
D:\FEWS\DataPortal_iraq\bin\allregions_dekadal_gfspars.py 2019 36
```

References

- GFSPars Temperature Averages and Anomalies - Iraq PPG documentation
- Iraq dekad GFS-Temp web product page: http://earlywarning.usgs.gov/fews/product/77